brought home four of the nine shells and measured them as precisely as I could using a scale and graph-paper. One egg measured 34 x 25 mm, the others 33 x 25 mm.

**Incubation period:** The bird was first flushed from the nest when there were only 5 eggs in it, and again when there were 6 eggs and 8 eggs. This suggests that incubation commences long before the clutch is completed. However, since the ninth egg could have been laid only on the first or the second of August, and it hatched along with the others some time between the 10th and the 15th, that egg could not have undergone incubation for more than 14 days. The HANDBOOK gives the incubation period as 18-22 days.

I am deeply indebted to Achuthankutty Nair for informing me of the nest as well as for his active interest in and assistance at every stage of this short study.

August 18, 1989 K.K. NEELAKANTAN

## 11. BREEDING OF THE KORA OR WATERCOCK *GALLICREX CINEREA* IN KERALA

When, after an absence of nearly 40 years, I returned in January 1986 to reside permanently in my native village of Kavassery (Palghat district, Kerala) one of my neighbours, a farmer who used to shoot birds for the pot, told me that a large black bird with a pointed red comb and loud booming calls had become a regular monsoon visitor to this area since about 1960. Realising that he was referring to the kora *Gallicrex cinerea*, I requested him and various other farmers of the village to let me know if they came across a nest of this bird.

With the arrival of the south-west monsoon in June 1986 the kora returned to this locality and made its presence felt by calling regularly every morning, evening and night. Male koras could be seen easily at various places till the paddy grew tall enough to hide them. Three monsoons went by without providing me with any evidence of the kora's nesting in this region. As I had explained in an earlier note (*JBNHS 87:* 293) on the voice of the kora, I began to suspect that most of the koras that visited this area were males that had not begun to breed.

This conjecture was disproved on 14 September 1989, when I was brought a juvenile kora which had been captured by reapers from a paddy field. It had been found with another chick in the company of a male kora. The other chick had died of injuries inflicted by a reaper's sickle, and the male had flown off.

The chick that was brought to me was about the size of a waterhen *Amaurornis phoenicurus*. It was fully feathered but had no rectrices. Only some rough measurements could be taken. They were: bill (straight from the tip to the top of the frontal shield) - 3 cm; tarsus - 7 cm; middle toe without the claw - 7 cm; hind toe without the claw - 2.5 cm. As the remiges had not grown fully, the wings were not measured.

In shape and general appearance the chick resembled the illustration of a female kora by G.M. Henry in his GUIDE TO THE BIRDS OF CEYLON (1955 edition, p. 352) very closely but for the legs, which are unnaturally stout in the picture. The head and the back of the neck were brown; the chin and throat whitish; a broad stripe over the eye, and the cheek, were pale buff; there was a curved brown streak below the eye. The neck, breast, flanks and thigh-coverts were pale fulvous. The neck and breast were cross-barred with fine wavy black lines and the flanks, sides of the abdomen and thigh-coverts cross-barred with thicker and darker lines. The abdomen was unbarred and was paler buff than the breast and flanks. The feathers of the wing-coverts and scapulars were all dark brown with broad fulvous fringes. The remiges were dull blackish-brown; the edge of the wing and the narrow outer web of the outermost primary were pure white. The frontal shield, the culmen and the tip of the bill were horny (dull brownish-black). The rest of the bill was at first pale ochre but later turned yellowish-pink. The eyes were dark brown.

The food the chick fancied most was small freshwater fish. If offered fish larger than 50 mm long, it used to eat the front half fully and leave the rest more or less untouched. Small aquatic snails were also readily consumed. Paddy and fresh cucumber seeds were eaten if fish was not available, but the seed-heads and tender shoots of wild grasses were ignored.

24 hours after it had been put in a cage the chick slipped out through the bars (which were 2.5 cm apart), jumped to the ground and ran very fast. It never attempted to fly even when chased by a number of boys. After its recapture, the sides of the cage were covered with chickenwire mesh.

The chick never uttered any sounds even when, on 15 September, it was chased and caught. But eight days later, when taken out of the cage for a closer inspection and measurement, it uttered a series of loud, harsh and

nasal *krey*'s. It gave vent to similar calls when taken out to be released on 9 October. But although it was still being held by the legs, during the 15 minutes it took us to reach the spot chosen for its release (a small pool surrounded by dense bushes and paddy fields) the chick remained quite silent.

During the day it often rested standing on one leg or squatting with its legs folded under it. On the only occasion when I managed to catch it fast asleep, it had turned its head back and thrust its beak into the feathers of its back. Generally, when its cage was approached, it would turn towards the person and, after raising its head and fully extending its neck, would lower its head with a smooth third motion almost to its toes and straightaway raise it again. After repeating this a number of times it would suddenly leap up in vain attempts to get out of the cage. It was first noticed flicking its hind end (no tail feathers had appeared even on the day of its release) on 29 September. Thereafter it did so quite frequently.

In his BIRDS OF KERALA (1969) Salim Ali says that the nesting of the kora had not been recorded from Kerala. To the best of my knowledge the present report is the first record of the bird's breeding in south India.

October 26, 1989 K.K. NEELAKANTAN

## 12. HITHERTO UNRECORDED NESTING SITE OF YELLOW-WATTLED LAPWING *VANELLUS MALABARICUS* (BODDAERT)

On 1 May 1988 we came across a yellow-wattled lapwing *Vanellus malabaricus* sitting amidst thick green grass *c.* 15 cm high. The bird slunk away when we approached it. To our great surprise we saw two eggs there without any sign of a nest. We retreated from the spot immediately and the lapwing returned to the nest and resumed incubation. The bird was incubating the eggs when we visited the spot at 1000 hrs the next day. But the eggs could not be seen there at 1700 hrs the same day. A solitary yellow-wattled lapwing was preceding at some distance.

The typical nest is "an unlined shallow scrape on dry open sunbaked fallow or waste land" (HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN, Ali, S. and Ripley, S.D. 1969). All nests we observed in the Calicut University campus since 1980 were lined with pebbles, cowdung and small pieces of dry grass. But here not even a scrape was seen; the eggs were laid simply amidst grass.

The situation in which the nest was found deviates from recorded nest sites and we wonder at the survival value the bird had in departing from the normal.

K. VIJAYAGOPAL
November 21, 1989 STEPHEN CHACKO

## 13. GREENSHANK *TRINGA NEBULARIA* (GUNNER) FEEDING ON LARGE FISH

One aspect of the BNHS studies in the Great Vedaranyam Swamp in Thanjavur district of Tamil Nadu under the project 'Ecology of Point Calimere Sanctuary (An Endangered Ecosystem)' looks into the impact of an industrial salt works on waterbirds.

The birds that generally frequent the pumping station that pumps sea water into the main reservoir are fish-eating birds like egrets, storks, gulls and terns. These birds prey on the schools of fish swimming against the current of the pumped-in water. During census in the first week of September, I was surprised to see a flock of 18 greenshanks *Tringa nebularia* feeding on fish up to 5 cm long. Each bird would catch fish from the water's edge, take it to the shore, peck and handle it for about a minute before swallowing it head first. Swallowing was difficult, the bulge of the fish being conspicuous in the throat while swallowing.

Ali and Ripley (HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN, Compact Edition, 1983) do not list fish as part of the diet of greenshank. Incidentally, Ali and Ripley had reported a frog in the crop of a specimen, "seemingly too big for the narrow bill and gullet". However, Cramp and Simmons (HANDBOOK OF THE BIRDS OF EUROPE, THE MIDDLE EAST AND NORTH AFRICA 1985) mention that the greenshank feeds on fish fry regularly. However, in this cited case, the size of the fish was large.

September is the end of the salt extracting season and once the north-east monsoon breaks, salt production stops for about four months. During this period, less water than normal is stored in the reservoirs and condensers. This results in higher salinities and temperatures in the salt complex, as a result of which